

ANNEXURE 2 PROGRESS REPORT

ON THE APPLICATION FOR THE EXTENSION OF CERTIFICATE OF INCENTIVE

INFORMATON OF THE COMPANY

- Name of the Company: **VIETTEL TANZANIA PLC (HALOTEL)**
- Managing Director: Mr. Nguyen Tien Dung
- Address: 10th Floor, Tanzanite Park, Plot 38, South Ursino New Bagamoyo Road, P.O. Box 34716, Dar es salaam, Tanzania
- Certificate of Incorporation: 52674.

I. PLANNED ACTIVITIES FOR THE PERIOD

Viettel Tanzania PLC (Halotel)'s telecom project has deployed from 2014 and up to date, our capital expenditures have been invested in the project are as follows:

1.1 NETWORK PLAN FROM 2014 UP TO DATE

1.1.1 Overview of Viettel Tanzania Network from 2014 to 2024

FOR CONSTRUCTION OF NETWORK

No	CODE	Name	Total	Detail for site		
				VTZ	HTT	TTCL
TOTAL			3092	1572	1515	5
1	ARU	Arusha	134	62	72	
2	DAR	Dar es Salaam	484	92	392	
3	DOD	Dodoma	153	93	58	2
4	GEI	Geita	82	46	34	2
5	IRI	Iringa	89	47	42	
6	KAG	Kagera	113	74	39	
7	KIG	Kigoma	130	83	47	
8	KIL	Kilimanjaro	92	31	61	
9	KAT	Katavi	47	31	16	
10	LIN	Lindi	73	56	17	
11	MAR	Mara	89	48	41	
12	MBE	Mbeya	190	72	118	
13	MOR	Morogoro	128	65	63	
14	MTW	Mtwara	111	78	33	
15	MWA	Mwanza	179	97	82	
16	MAN	Manyara	65	45	20	

17	NJO	Njombe	62	32	30	
18	PEM	Pemba	18	8	10	
19	PWA	Pwani	78	39	39	
20	RUV	Ruvuma	112	82	30	
21	RUK	Rukwa	76	43	33	
22	SIN	Singida	73	41	32	
23	SHI	Shyanga	90	58	32	
24	SIM	Simiju	63	41	22	
25	TAB	Tabora	130	95	35	
26	TAN	Tanga	144	78	65	1
27	ZAN	Zazibar	87	35	52	

FOR INSTALATION OF EQUIPMENT:

No	CODE	Name	Total	Detail for site		
				2G	3G	4G
TOTAL			7237	2912	2180	2145
1	ARU	Arusha	320	123	91	106
2	DAR	Dar es Salaam	1334	391	481	462
3	DOD	Dodoma	315	139	74	102
4	GEI	Geita	192	79	65	48
5	IRI	Iringa	187	87	47	53
6	KAG	Kagera	262	113	85	64
7	KIG	Kigoma	331	128	103	100
8	KIL	Kilimanjaro	242	90	72	80
9	KAT	Katavi	110	46	36	28
10	LIN	Lindi	138	73	26	39
11	MAR	Mara	212	89	64	59
12	MBE	Mbeya	468	179	145	144
13	MOR	Morogoro	284	122	72	90
14	MTW	Mtwara	209	111	49	49
15	MWA	Mwanza	415	174	125	116
16	MAN	Manyara	146	65	36	45
17	NJO	Njombe	144	62	43	39
18	PEM	Pemba	48	18	17	13
19	PWA	Pwani	171	76	48	47
20	RUV	Ruvuma	229	112	51	66
21	RUK	Rukwa	165	75	49	41

22	SIN	Singida	167	71	49	47
23	SHI	Shyanga	227	89	77	61
24	SIM	Simiju	129	63	39	27
25	TAB	Tabora	273	129	81	63
26	TAN	Tanga	295	136	75	84
27	ZAN	Zazibar	224	72	80	72

1.1.2 Viettel Tanzania Plan for the year 2014 to 2016

In 2015 Viettel Tanzania had a Phase 1 plan of building 1,500 BTS sites to cover a total of 1,800 villages which was provided by the Government of Tanzania through the Master Contract between the Military Telecommunication Company VTG and Ministry of Communication as a representative of government of Tanzania for the provision of communication services to selected 4000 villages around Tanzania and the results on the year 2015 for both Transmission optical cables and building BTS sites we managed to succeed to build 1366 BTS sites from the period of October 2014 to December 2015 where by total Optical fiber cables for covering of all these sites where a total of 15,000km of optical cables all over the country with this achievement we decided to move for the next plan.

1.1.3 Viettel Tanzania Plan for the Year 2016 to 2017

For the year 2016 to 2017 we had a **Phase 2** for the covering of **500 BTS** sites to add more sites to complete commitment with government of Tanzania of covering more **1,200 villages** based on master Contract, whereby our plan for this year was to build 500 BTS for the same and extend our fiber optical cables from **15,000 km to 18,000km** all over the country. Halotel have succeeded to deploy **3,000km** of fiber for the year 2016 to 2017 it was with great achievement that for this year we were the company with largest fiber cable all over the country connecting one BTS to another to provide best data and voice mobile services that people of Tanzania have never experienced before.

1.1.4 Viettel Tanzania Plan for the Year 2017 to 2018

After successful completion of **Phase 1 and 2** for covering of 3,000 villages we have another plan for completion of covering 4,000 villages by having Plan of Phase 3 to build **354 BTS** sites to cover

Remaining 1,000 villages and deployment of more fiber to cover more villages we have deployed more than 2,000km of fiber for this year where we reach a total of around 20,000 km of Optical fiber Cable (OFC) all over the country which we have successfully completed not only complete this plan itself but also on this year we have won to build and cover 47 lots from UCSAF-(Universal Communication Services Access Fund) where by follow our network design we have come to build 60 BTS sites to cover 47 lots awarded by UCSAF Phase 2 “ Provision of Rural Telecommunication services for boarder and Special zone phase 2 for 47 designed lots” of tender no. IE/037/2016-17/HQ/NC/08 from UCSAF board to Viettel Tanzania, for the year end 2017

we have successfully completed the project of covering uncovered 47 lots with more than 200 villages which are all located in borders of regions in Tanzania.

1.1.5 Viettel Tanzania Plan for the Year 2018 to 2019

In 2018 to date we have been awarded second Contract with UCSAF “**Provision of Rural Telecommunication Services to Rural and Urban Underserved Area Phase 3 for Designed 82 Lots**” of tender no. **IE/037/2017-18/HQ/NC/03** from UCSAF board it is contract of 1 year of implementation of the same to-date we have completed construction of all **87 BTS** sites based on planned design to cover these **82 Lots** we have assigned by UCSAF to cover.

On the same year we have managed to bid from tender announced by UCSAF on 14 July 2019 a total **150 lots** out of **521 lots** that were presented by UCSAF board to all operators for bidding from primary bid closing date on 3rd October 2019 we have won **115 lots** out of 150 lots which we have bid, which is high number of lots to be covered by Halotel signal more than any other operator who has participated on tendering process.

1.1.6 Viettel Tanzania Plan for the Year 2019 to 2020

Due to the Covid and other issues, we didn't make the big investment in 2019-2020.

1.1.7 Viettel Tanzania Plan for the Year 2020 to 2021

In the year 2020 to 2021 we have 2 big projects deployment of UCSAF Phase 4 and Upgrade of sites from 3G and 2G to 4G for 600 sites on our network, on the deployment of UCSAF Phase 4 it include 115 lots which was completed in the end of 2021. While on deployment of 4G sites upgrade we have managed to upgrade sites to increase customer data and voice quality of services.

1.1.8 Viettel Tanzania Plan for the Year 2021 to 2022

This year Halotel Tanzania we have a project of Deployment of 23 lots from UCSAF Phase 6 were by now we are waiting for the government to give notification on signing of the contract. We continue to expand our network as we do have 4G upgrade for 681 sites to provide better quality services for data and voice to our customers.

1.1.9 Viettel Tanzania Plan for 2022-2023

In 2023, HALOTEL made significant strides in expanding and upgrading its telecommunications infrastructure across Tanzania. The achievements underscore our commitment to enhancing connectivity and improving service quality for our customers. Here's a summary of our key accomplishments in infrastructure development:

- **New BTS Locations:** Successfully built 54 new Base Transceiver Stations (BTS), enhancing our network's reach and capacity.
- **2G Network Expansion:** Launched 28 new sites with 2G technology, providing basic voice and data services to previously underserved areas.
- **3G Network Expansion:** Introduced 3G technology at 31 new sites, offering improved data speeds and access to mobile internet services.

- **Network Upgrades:**
 - Upgraded 178 sites to 3G, significantly enhancing mobile internet coverage and quality.
 - Elevated 435 sites to 4G technology, offering high-speed data services and a better user experience for streaming, browsing, and downloads.
- **Microlink Deployment:** Installed 21 Cerragon microlink connections, boosting backhaul capacity and network reliability.
- **Fiber Optic Cable:** Laid 120 kilometers of fiber optic cable, enhancing our core network's bandwidth and reducing latency for users.
- **Wooden Pole Planting:** Erected 1,760 wooden poles as part of our infrastructure development efforts, supporting the expansion of both aerial fiber optic networks and wireless services.

Regional Breakdown of Network Enhancements

No	CODE	Region	4G	3G	2G New site
1	AR	Arusha	8		
2	DA	Dar es salaam	38	3	1
3	DO	Dodoma	31	6	4
4	GE	Geita	11	12	
5	IR	Iringa	11	9	
6	KA	Kagera	10	26	1
7	KG	Kigoma	24	12	1
8	KI	Kilimanjaro	13		
9	KV	Katavi	8	4	1
10	LI	Lindi	18		
11	MA	Mara	13	2	3
12	MB	Mbeya	41	15	
13	MT	Mtwara	11	7	1
14	MW	Mwanza	18	12	2
15	MY	Manyara	13		
16	NJ	Njombe	8		
17	PE	Pemba	2		3
18	PW	Pwani	7		5
19	RV	Ruvuma	24	6	
20	RW	Rukwa	10	17	1
21	SG	Singida	13	7	
22	SH	Shinyaga	7	11	
23	SI	Simiyu	9	3	
24	TB	Tabora	15	17	
25	TG	Tanga	35	6	1
26	ZA	Zanziba	11		12
27	MO	Morogoro	26	3	
Total			435	178	36

(Table truncated for brevity. Full details include all regions and the distribution of 2G, 3G, and 4G site upgrades.)

Total Achievements in 2023

- **4G Site Upgrades:** 435
- **3G Site Upgrades:** 178
- **New 2G Sites:** 36

These efforts reflect HALOTEL's dedication to bridging the digital divide and fostering socio-economic development through enhanced digital connectivity in Tanzania. We're proud of our progress in 2023 and remain committed to further expanding and improving our network infrastructure in the years to come.

1.2 CAPITAL EXPENDITURE FOR DEPLOYMENT OF THE NETWORK

In this section, capital expenditure described are which have been spent on network deployment. The total financial expenditure of the telecom project is stated in the section II of this report.

BUYING OF EQUIPMENT FOR DEPLOYING INFRASTRUCTURE												
No	Item	Accumulated	2,014.00	2,015.00	2,016.00	2,017.00	2,018.00	2,019.00	2,020.00	2,021.00	2,022.00	2,023.00
1	Core	9,148,881.87	-	4,380,707.50	-	3,935,769.99	68,087.50	233,700.00	399,413.48	117,207.34	13,996.06	456,808.00
2	IT	9,460,101.31	-	1,117,294.77	146,985.96	972,372.37	845,338.87	1,311,619.50	-	2,891,514.72	2,174,975.13	1,441,170.00
3	Radio	57,904,472.44	33,396,448.24	3,787,591.00	1,336,400.00	2,454,364.40	1,521,145.76	2,531,892.56	4,440,656.13	5,576,190.75	2,859,783.60	4,562,015.00
4	Transmission	56,689,535.08	5,454,943.07	38,377,265.26	2,483,502.58	22,049.42	2,149,519.13	3,643,673.86	1,870,118.15	1,210,789.14	1,477,674.47	4,816,782.00
5	ME for BTS	132,463,433.74	23,606,440.19	68,239,185.62	6,664,237.14	9,964,241.72	6,984,276.99	4,131,738.97	611,323.85	7,903,926.40	4,358,062.86	3,873,400.00
6	Fixed Broad band	13,110,072.17	9,267,116.93	2,995,584.29	-	-	440,000.00	162,870.95	-	-	244,500.00	-
7	Insfrastrure	20,455,392.82	11,575,064.48	5,803,025.39	113,278.69	1,460,975.96	1,427,279.83	70,618.27	-	-	5,150.21	2,330,663.00
Total investment for equipment and material		299,231,889.43	83,300,012.90	124,700,653.83	10,744,404.36	18,809,773.85	13,435,648.08	12,086,114.11	7,321,511.61	17,699,628.35	11,134,142.33	17,480,838.00
OTHER RELATED COST FOR INVESTMENT												
	Total investment											
8	For buying license from EPOCH	1,051,400.00	1,051,400.00								30,000,000.00	
9	For Luku expand	1,660,000.00	1,000,000.00			660,000.00						
10	Cost for buying EPOCH	21,600,000.00	21,600,000.00									
11	Instlation and Construction	95,126,201.16		95,126,201.16								
12	Local transportation	6,490,000.00	4,470,000.00			2,020,000.00						
Total investment		425,159,490.59	111,421,412.90	219,826,854.99	10,744,404.36	21,489,773.85	13,435,648.08	12,086,114.11	7,321,511.61	17,699,628.35	41,134,142.33	17,480,838.00
Total accumulated investment			111,421,412.90	331,248,267.89	341,992,672.25	363,482,446.10	376,918,094.19	389,004,208.30	396,325,719.91	414,025,348.26	455,159,490.59	472,640,328.59

1.3 ACHIEVEMENT OF THE PROJECT

1.3.1 Achievement on business

Halotel's achievement on business activities are as follows:

- In general:

- We are investing to reach new level of Revenue with target increasing at least 15% compare last year & Increasing 10% total subscribers compare last year
- Encourage customer enjoy our speed with 4G- new technology, digital service & change habit in voice to data & 4G, mobile money & digital
- Implementing & support for customer more service especially in Rural, Village & focus on young people, disable customer, women, students, old person....
- Reach more than 1 million 4G subscriber in 2023
- Join in some major project install & connecting internet service to School, Government Office, Hospital & Domestic Company....
- Improve & coordinate with Government/Company, support & give to Tanzania citizen with ICT solution

- In terms of subscribers:

- Increasing 10% ~700.000 subscribers in 2023 (nearly 5,2M 15C3D subscribers in 30days & 8.7M subscribers in 90days) & keeping that performance in 2024/2025.
- Reaching more than 1million 4G subscribers in 2023; 2million 4G subscribers in 2024 & 3 million 4Gsubscribers in 2025.

- In terms of revenue:

REVENUE (Million Tsh)	2015	2016	2017	2018	2019	2020	2021	2022	2023
Halotel	8,096	115,334	160,325	157,219	171,329	211,711	263,469	302,561	311,633
Halotel + Halopesa	8,096	115,578	161,591	159,719	178,985	232,894	306,766	354,626	382,431

- Keeping performance with speed average at least >15% increasing in Revenue & 10% in Subscribers (compare last year)
- Move from customer using only Voice/Sms to Data/Digital/Mobile Money service
- Improve more market share & at least 10% of total customer using smartphone per year

- In terms of network coverage and quality:

Station locations :2,857 (2G / 3G / 4G: 2,707/1,942/927) (including 1,497 sites hiring fromHHT Towers and 1,356 Halotel's sites)

About coverage: 2G / 3G / 4G achieved:

- 2G: urban (99.53%), rural (75.5%), nationwide (83.5%).
- 3G: urban (98.36%), rural (39.61%), nationwide 57.5%).

- 4G: Nationwide (21%)
- *In terms of transmission*
- VTZ transmission network is built on the basis of all IP technology combined with DWDM for routes longer than 80 km; including 2 General stations connected by 3 DWDM axes; 04 core zones, 226 AGG devices, 20 CTs, 1248 SRT, 1556 IP microwaveroutes, 18,780 km of trunk and branch cables.

1.3.2 Achievement on tax contribution to Tanzania Government

Year	Amount
2014	1,244,908,041.00
2015	60,790,867,354.10
2016	34,060,038,596.11
2017	64,098,293,766.18
2018	64,124,103,056.04
2019	64,560,080,746.93
2020	66,097,330,077.66
2021	91,151,880,273.18
2022	144,850,423,508.01
2023	186,668,857,709.00
Total	777,646,783,128.21

1.3.3 Achievement in relation to the project with former Ministry of Communication, Science and Technology (MCST) to provide services in rural areas of Tanzania

The Government of Tanzania through the former Ministry of Communication, Science and Technology (MCST) signed a Memorandum of Agreement (MOA) with VIETTEL on 16th July, 2014 to invest in the telecommunications infrastructure and services in the rural areas. The project aimed to complement the Government initiatives for establishment of Universal Communication Services Access Fund (UCSAF) which has a role of providing communication services to rural and underserved areas.

Though the project Viettel has managed to deploy network connectivity to almost all villages that were shared from UCSAF to be covered by Halotel Network where there were no network at all to people who lives in these undeserved area. It also supported local government authorities to easy access and use of communication services in rural and underserved areas. The project has also being a go forward to enhance capacity to harness the power of ICTs and availability of e-services among people in these area and their relatives who lives in capital cities and abroad.

Village connectivity is one among many that Halotel has opt to invest it's power to the Government of Tanzania through ministry of communication science and technology whereby the Company has putted a lot of efforts to acquire lands for building antenna mast and installation of transmission equipment to bring network signal to poor villages and up to now we have managed to cover 4,000 villages.

Most of these villages that we have connected with Halotel Network are covered with 2G and 3G network, people are using smart phones to access internet information more over people are using mobile money to send and receive money from their relatives which were not possible at first but through this project all 4000 villages has been covered with high speed network that allow people to use mobile network to increase productivity in their daily life. And as of now we are waking towards 4G network. All these activities have also enable work opportunity to people who live in these areas.

- ✓ To date we have succeeded to install/deploy more than 18,780 KM of fiber optic cable including underground and overhead cable through mainland and Zanzibar Island to ensure that the signal quality meet current world requirement and standards to the consumers.
- ✓ The number of base stations that we have calculated to cover 4000 villages in rural underserved area where more than 4000 Base stations to ensure network is reliable and in good quality (-95dB) to the center of the villages and about (-100dB) to the border of the villages.

Six core segments for the Government: Moreover Viettel has invested in deploying of VIETTEL’s optic Fiber with 24 cores and Optic Fiber Infrastructure with the aim to cover national wide of the United Republic of Tanzania, where by the Government owns six cores in all the deployed Fiber Optic cable which are aimed at connecting Local Government Authorities to easy access and use communication services in rural, underserved areas and increase the national penetration to Government ICT services. The deployment is done pending the handover which is implemented segment by segment.

On the part of internet we have been able to provide internet to different Government authorities as listed below in the table as also indicating the requirement and what has been done.

DISTRIBUTION OF INTERNET SERVICES TO GOVERNMENT AUTHORITIES

S/N	Planned Activity	Status
I	RESULT OF INFRASTRUCTURE DEPLOYMENT	
	PROGRESS OF IMPLEMENTING VIETTEL COMMITMENTS	
	(The target number is based on the list the Ministry provided Halotel up to now)	
1	Provide optical fiber termination completed 455/450 schools	101%
2	Optical fiber termination for District Council Office: 150/150 offices by optical cable.	100%
3	Optical fiber termination for District Hospital: 150/150	100%
4	Optical fiber termination for District Police: 150/150 Police by optical cable. Optical fiber termination for Law court Office to combine District Police: 26 sites. Total: Optical fiber termination for District Police (Low court) : 150/150	100%
5	Optical fiber termination for Department Post Office: 66/65 Offices by optical cable.	101%

1.3.4 The contribution for Tanzania Citizen

Viettel Tanzania Plc is an equal opportunity employer and does not differentiate any employee based on gender, nationality, race or disability.

The Company considers its employees as its key assets and upholds employee welfare among its top priorities. During the year 2023, the total number of Tanzanian Employees was 966, 773 being female employees and 193 male employees, from both Tanzania Mainland and Zanzibar. The Company continues to create more employment opportunities through its expansion of its network infrastructure. As the operations of the Company grow, so does the need to employ more personnel.

The Company's employment terms are reviewed annually to ensure that they meet statutory and market conditions. Employee benefits include salaries, bonuses, social security contributions, paid annual leave and sick leave which are accrued in the period in which the associated services are rendered by the employees. All of the Company employees are members of a defined contribution plan, the National Social Security Fund ("NSSF") and the Zanzibar Social Security Fund ("ZSSF"). The Company and Employees both contribute 10% of the employees' gross salaries to the Funds. The Company improved the employee welfare during the year, particularly, on health insurance cover. The Company aims to continuously improve employee welfare, a goal tasked to the Human Resources, Legal and Finance departments.

The Company provides training and holds regular meetings with all staff. Teamwork building activities are also held annually. Knowledge, experiences and skills are gradually being transferred from experts to Tanzanian employees. 6 (six) Tanzanian employees have been promoted to Regional Director during the year. A further 5 Tanzanian employees have been promoted to Vice Branch director positions. This was possible following the extensive training provided to the employees during the years. Most trainings are provided locally, however some require the employees to travel abroad.

Five (5) employees have travelled abroad for extensive trainings. In overall, trainings have led to the significant development of employee's skills and knowledge, and ultimately leading to improved and efficient operations at the Company.

II. PROJECT FINANCIAL EXPENDITURE TO DATE

Project financial expenditure at 31/12/2021:

Land Building	:	Tsh 0
Plant and Machinery	:	Tsh 842,734,039,751
Vehicle	:	Tsh 9,491,832,974
Furniture	:	Tsh 2,281,264,100
Office Equipment	:	Tsh 6,561,202,582
Insurance cover	:	Tsh 0
Pre-operational Expenses	:	Tsh 0
Working sub-total capital	:	Tsh -1,184,384,491,648

III. PROJECT FINANCING

A. Equity.

At the end of 2014, Viettel Global JSC acquired 99.99% shares of Epoque & Golden Ocean (Tanzania) Limited (“Eocha”)’s shares from its former shareholders and became the major shareholder of the Company. The amount of USD 21,615,385.00 spent to acquire Epoque’s shares. Total equity of Epoque at the end of 2014 was TZS (12,813,643.00) due to the loss incurred from previous financial years (Epoque then was changed its name to ViettelTanzania LTD/ PLC from 2015).

In December 2018, Viettel Global JSC, the shareholder of Viettel Tanzania PLC has injected capital of USD 16 million which is approximately equivalent to Tanzanian shillings 35.60 billion making the total of Viettel Tanzania PLC’s contributed capital at the time being is Tshs 43,534,800,000.

In April, 2021, Viettel Global JSC also contributed capital of USD 15 million to Viettel Tanzania PLC. At the ending of 2021, the contributed capital of Viettel Tanzania PLC is TZS 78,274,800.00.

B. Shareholder’s Loan

The parent company has provided Viettel Tanzania PLC with two facility loans of USD 150 Million and USD ~24,8 Million. Until now the amount has already been drawn down is USD 148 Million (under USD 150 Million facility) and all USD ~24,8 Million (under the USD ~24,8 Million facility).

C. Bank Loans

Viettel Tanzania PLC’s loans at ending of 2023 come from 03 oversea banks and 01 local bank:

- + Vietin Bank – USD 25 Million facility
- + SCB Mauritius – USD 25 Million facility
- + NMB – USD 5 million facility.
- + TP Bank USD 20 million facility.

IV. PROBLEM AND SOLUTION

4.1 Difficulty 1: Complicated custom clearance procedure

Up to now, Viettel Tanzania PLC already made importation for more than 1000 consignments coming from many suppliers and many ports to Tanzania. But currently, Viettel Tanzania got many issues with importation.

- (b) Many requirement of importation from difference Authorities.

Importers in Tanzania are required to establish whether or not the goods to be imported are subject to Pre-shipment Verification of Conformity (PVoC). In general, any shipment valued at over USD 5,000 is subject to PVoC. Some goods are exempt from PVoC. 1.2 percent of FOB value must be paid to a designated commercial bank. Importers must provide full contact

details of actual suppliers. But after getting this PVOC for custom purpose, we also need to apply many other Certificate from different Authorities. For example, for Handset, after getting the PVOC from the authorized agent of TBS, we still need to apply for Type of Approval from TCRA and the Permit to use, to sell it in Tanzania.

→ Solution: If authorizer allow to remove all of the permit, or certificate with the same usage to reduce the burden for the investor.

(c) The procedure for the consignment get beith is too long and importer is hard tochoose the ICD by themself

Currently, the port is too small to load the consignment. Nowadays, the consignment takes long time to get beith. And Tanzania Port Authority is the one to pick up the IDC for the importer. This situation causes the investor too much for the delaying of speed of proceeding the projects.

→ Solution: TPA should have the good policy for the strategy investors to choose the IDC by themselves to remove all of the unnecessary delay.

V. FUTURE PLAN.

5.1 Plan in 2024 -2025

As HALOTEL, a major telecommunications operator and strategic investor from Vietnam, our commitment to Tanzania since 2014 has been driven by a vision to enhance connectivity and foster economic growth through technology. With this enduring mission in mind, we are excited to present our 2024 Investment Plan to the Tanzania Investment Centre (TIC) for consideration and support.

Building on our successful investments in Tanzania over the past decade, HALOTEL aims to significantly expand our network infrastructure, modernize equipment, and acquire assets critical for business development. Our 2024 plan outlines an ambitious strategy to deepen our market penetration, enhance service quality, and introduce innovative solutions to meet the evolving needs of Tanzanian consumers and businesses.

5.1.1 Investment Highlights

5.1.1.1 Investment in Wireless and Core Network Expansion:

Prioritize the deployment of new stations and upgrade core networks to improve coverage and capacity, particularly focusing on areas with high demand and potential for growth.

Wireless Network Expansion

Deployment of New Stations: Invest in deploying 596 new stations to expand coverage, including 380 4G co-site stations with existing 2G/3G sites and 216 new site locations to ensure investment efficiency.

License Upgrades: Upgrade licenses for cells to increase capacity from 15MHz to 20MHz for 283 cells and from 15MHz to 30MHz for 496 cells to accommodate growing traffic.

Refarming Spectrum: Utilize 675 license cells of 5MHz 1800 to refarm for 225 stations to

rapidly expand 4G coverage, focusing on priority areas first to quickly enhance service availability.

Core Network Enhancement

Cloud MSC Expansion: Invest in expanding MSC cloud hardware to support increased subscriber capacity (ATT/Reg: 650K/910K subscribers) and add cards to reduce congestion in existing MSCs.

HSS/HLR/EIR Expansion: Extend the software to support additional subscribers - 700K subs for FE HLR, 300K subs for FE HSS, 1.2M subs for BE HSS, and 2.9M subs for BE EIR.

PS Core Deployment: Roll out a new GGSN in Zanzibar for enhanced packet-switched core network capabilities, with hardware supporting 20Gbps and software supporting 9Gbps.

SBC System Swap: Replace the end-of-sale (EoS) Session Border Controller (SBC) hardware to modernize and secure voice over IP (VoIP) services.

SMSC Hardware Investment: Allocate funds for new Short Message Service Center (SMSC) nodes to handle increased transaction rates and ensure redundancy (N+1 hardware).

Investment Values

The investment values are prioritized into two categories, reflecting the strategic focus on rapidly enhancing network coverage and capacity (Priority 1) and subsequently focusing on core network modernization and redundancy (Priority 2).

5.1.1.2 Optical and Core IP Transmission Enhancements:

Increase investment in optical transmission and core IP to enhance network reliability and support higher data volumes, catering to the growing needs of digital services.

The detailed plan for Optical and Core IP Transmission Enhancements involves comprehensive infrastructure improvements aimed at significantly bolstering network capacity, reliability, and performance. Here's a breakdown:

Optical Transmission Enhancements

Deployment and Upgrades: Invest in the deployment of 950km of optical fiber cables and accessories to replace deteriorated lines and 100km of cable relocations due to government road projects.

Network Quality Improvement: Allocate funds for enhancing the network quality, including the rehabilitation of 11 optical fiber routes totaling 17km, introduction of a new Network Management System (NMS), and 2 Packet Relay Communications (PRC) for synchronized network operations.

Capacity Upgrades: For the second priority, plan for the optical electrification of 20 stations (~48km) and increase the capacity of one optical fiber access line.

Core IP Transmission Enhancements

Metro and Core Regional Upgrades: Supplement the metro and core regional network with additional 10GE cards for two pairs of core regional at two main stations to support increased traffic flow.

AGG Network Capacity Enhancement: Increase the capacity for two AGG rings with 07

nodes by adding PIC 6x10GE to handle anticipated traffic congestion and ensure seamless data flow.

SRT Network Upgrades: Upgrade the capacity of SRT rings to 10G as the default due to existing 10GE ports, to accommodate future growth in traffic demands efficiently.

Investment in Broadband Fixed Network

Core Network Equipment: Invest in BRAS, AAA, DNS equipment to meet the business demands of 2024, ensuring a resilient and expandable network infrastructure.

5.1.1.3 Electromechanics and Infrastructure Modernization:

Allocate funds towards modernizing electromechanical systems and infrastructure to improve energy efficiency and sustainability.

The Electromechanics and Infrastructure Modernization component of the 2024 investment plan, as outlined in the document, includes a series of strategic initiatives aimed at enhancing operational efficiency, reliability, and sustainability of the network infrastructure. Here's a detailed breakdown:

Electromechanical Upgrades

Deployment of Mini-shelters: Implement mini-shelters for stations to optimize cooling for equipment and batteries, ensuring the longevity and reliability of critical network components.

High-Altitude Warning Lights: Equip high structures with warning lights to comply with Tanzanian aviation and safety regulations.

Electricity Optimization: Focus on pulling electrical connections to station locations capable of such enhancements to optimize energy costs and improve the environmental footprint of operations.

Infrastructure Modernization

Hardware Redundancy: Investment in additional hardware for redundancy to fortify network reliability and avoid potential service disruptions.

Broadband Fixed Network (CDBR) Core System: Invest in core network equipment that has been tested in Vietnam and other markets (BRAS using 8x10GE line cards, open-source DNS, and AAA systems) to ensure compatibility with the existing transmission network, reduce investment costs, and simplify operational management.

Technological Investments

IT Infrastructure: Deploy server and storage devices with new technology to meet the current and evolving network demands. This includes servers using the latest Intel chip technology (Gen4 CPUs, DDR5 RAM) and storage devices utilizing all-flash technology for high-speed read/write capabilities, low latency, data compression, and deduplication for optimal durability.

Strategic Approach

Phase-based Investment: The investment plan adopts a phased approach, prioritizing electromechanical upgrades and infrastructure modernization that support rapid market

capture and network resilience.

Utilization of Existing Resources: Maximize the use of available resources and only invest in new assets for long-term value, optimizing internal efficiencies across markets and maintaining the current network architecture and technological foundation.

5.1.1.4 Technology and Equipment Acquisition:

Strategically acquire advanced technology and equipment to bolster network performance and service quality, ensuring HALOTEL remains at the forefront of telecommunications innovation in Tanzania.

The Technology and Equipment Acquisition section of the "Plan in 2024" document details HALOTEL's strategic investments to acquire cutting-edge technologies and state-of-the-art equipment for its operations in Tanzania. This involves a series of initiatives aimed at modernizing infrastructure, expanding service capabilities, and improving the overall network performance to meet the demands of a rapidly growing customer base. Key components of this investment include:

Deployment of New Broadband Fixed Network Ports:

The plan includes the deployment of 20,000 new CDBR ports to support business development and cater to an additional 7,200 subscribers in 2024. This involves a substantial investment in GPON OLT equipment, subscriber cabinets, optical fiber cables, and other necessary infrastructure.

Advanced Computing and Network Storage Solutions:

Investments in 20 servers, storage devices, firewalls, load balancers, and switches for the Halopesa 3.0 system, alongside equipment for HaloPlay, SMSFW, and Voicemail systems. This update is crucial for supporting the expansion of Halotel's services, including its mobile money platform.

Upgrades and Expansions:

Ensuring resources for system expansions such as Halopesa Balance Plus and MEDIATION, as well as for the general storage needs of new and expanding services. This includes replacing outdated equipment to ensure the network's reliability and security.

Technology Innovation:

Utilizing the latest chip technology from Intel (Gen4 RAM DDR5) for servers, and adopting All Flash storage technology for high-speed, low-latency data access. This technological leap will provide Halotel with a competitive edge by enhancing the performance and efficiency of its services.

Infrastructure Virtualization:

Continuing the expansion on vCloud infrastructure to improve resource utilization flexibility, scalability, and reduce server provisioning times. This approach aligns with modern IT strategies to optimize operational efficiency and reduce capital expenditures.

Wireless Network Enhancement:

Utilizing existing 1800MHz equipment from Huawei for refarming to quickly expand 4G coverage with minimal costs, by investing in licenses only. This strategy includes optimizing

cell capacity based on real market statistics rather than theoretical capacities, ensuring that investments directly respond to user demand and market growth.

Phased Investment Approach:

Implement a phased investment strategy, beginning with critical network enhancements to solidify the foundation for future expansions and technological upgrades.

Leveraging Existing Assets:

Maximize the use of current resources and infrastructure to ensure cost-effective expansion and upgrades, avoiding unnecessary expenditures on rapidly outdated technologies.

5.1.1.5 Conclusion

HALOTEL is committed to being a catalyst for positive change in Tanzania, leveraging our expertise and resources to enhance digital connectivity and enable socio-economic development. Through this investment plan, we aim to solidify our position as a leading telecommunications provider in Tanzania, driving forward our shared vision for a connected and prosperous future.

We look forward to the opportunity to discuss this plan in detail with the Tanzania Investment Centre and to explore how we can work together to achieve these ambitious goals.

5.2 Expansion and upgrading of current Telecom network

Investment Plan for maintenance and upgrade the network for next 24 months:

ANNEX FOR PICTURE OF PROJECT IMPLIMENTATION

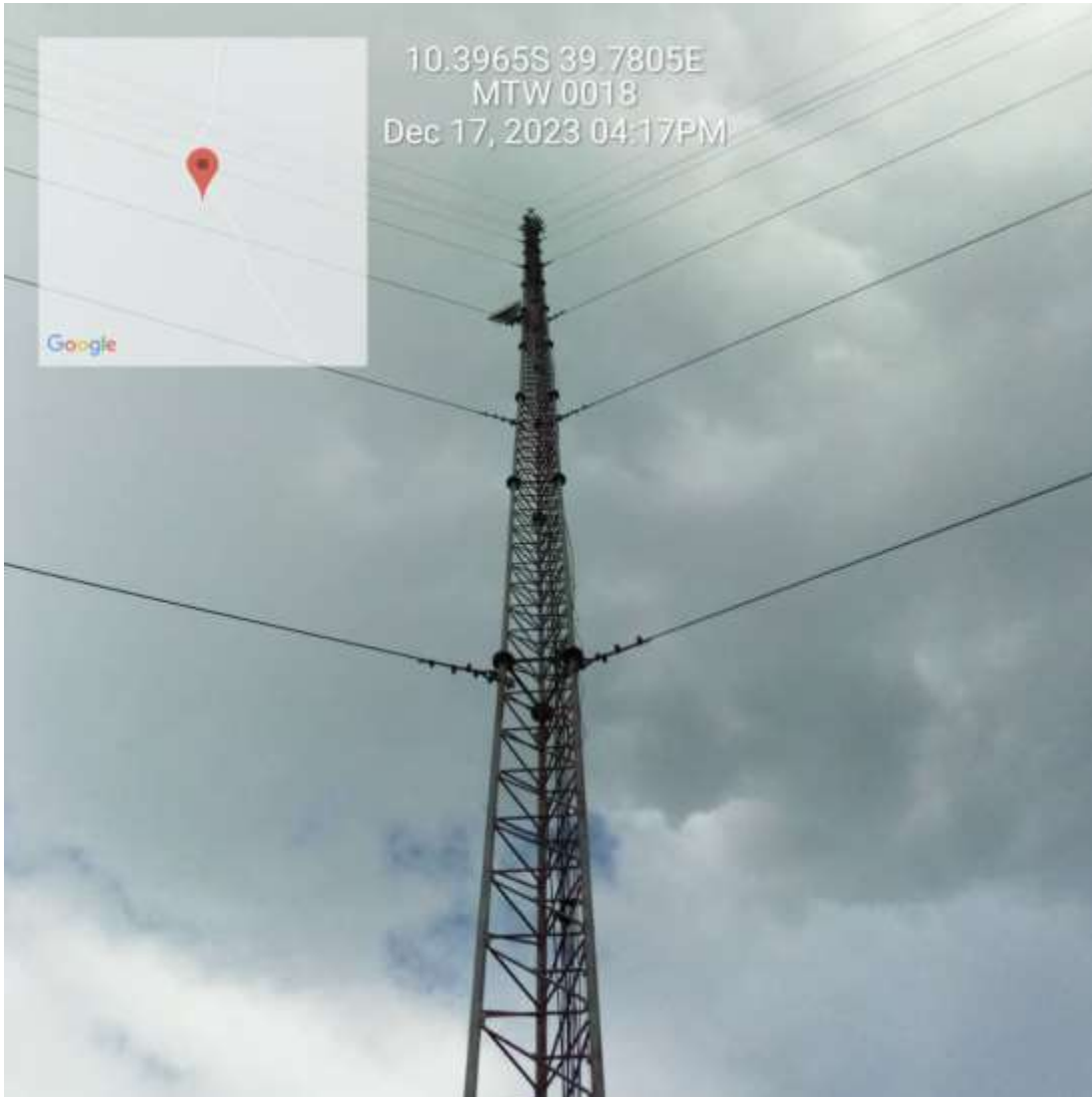
No	SECTOR	INVESTMENT 2024-2025							
		Mandatory Investment		Development			Stable Enforcement	Modernlization	Total 2024-2025
		Rescuring	Other mandatory	Coverage	Capacity				
					<i>Avoid congestion</i>	<i>Increase Capacity</i>			
		2,260,008	208,440	17,680,477	107,989	7,251,397	7,970,677	921,009	36,399,998
1	RADIO	232,440	-	9,006,581	-	3,067,567	-	130,415	12,437,002
2	CORE	-	-	-	-	1,412,666	759,480	455,451	2,627,598
3	TRANSMISSION	1,464,321	158,438	1,521,673	-	75,498	2,956,452	332,100	6,508,482
4	CORE IP	89,600	1,689	210,357	78,499	519,942	-	-	900,087
5	MECHANICAL & ELECTRICAL	236,978	-	2,412,283	-	341,890	1,580,505	-	4,571,656
6	FIXED BROADBAND	-	48,314	1,763,068	-	-	-	-	1,811,381
7	IT	236,669	-	-	29,489	1,161,156	545,689	-	1,973,002
8	INFRASTRUCTURE	-	-	2,766,516	-	672,679	2,128,551	3,043	5,570,789

ANNEX 01: PICTURE OF PROJECT:





3 Feb 2024 12:20:56 PM
129° SE
Dodoma Urban
Dodoma Region
DO 0158 sector 1





Jan 13, 2024 17:52:11
Index number: 971



